

een

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,711	10/29/2003	Cechan Tian	064731.0378	5574
5073 BAKER BOTT	7590 05/18/200 CS	7	EXAM	IINER
2001 ROSS AV		•	BELLO, AGUSTIN	
SUITE 600 DALLAS, TX	75201-2980		ART UNIT PAPER NUMBER	PAPER NUMBER
,			2613	
•				
			NOTIFICATION DATE	DELIVERY MODE
,			05/18/2007	ELECTRONIC

# Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mike.furr@bakerbotts.com ptomail1@bakerbotts.com

	Application No.	Applicant(s)	
	10/695,711	TIAN ET AL.	
Office Action Summary	Examiner	Art Unit	
	Agustin Bello	2613	
The MAILING DATE of this communication a Period for Reply	ppears on the cover sheet w	ith the correspondence address	=-
A SHORTENED STATUTORY PERIOD FOR REP WHICHEVER IS LONGER, FROM THE MAILING  - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory perior Failure to reply within the set or extended period for reply will, by stat Any reply received by the Office later than three months after the mai earned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNI 1.136(a). In no event, however, may a not will apply and will expire SIX (6) MOI ute, cause the application to become A	CATION. reply be timely filed  NTHS from the mailing date of this communic BANDONED (35 U.S.C. § 133).	
Status			
1)⊠ Responsive to communication(s) filed on 06	March 2007.		
	nis action is non-final.		
3) Since this application is in condition for allow		ters, prosecution as to the merit	ts is
closed in accordance with the practice under	Ex parte Quayle, 1935 C.[	). 11, 453 O.G. 213.	
Disposition of Claims			
4)⊠ Claim(s) <u>1-46</u> is/are pending in the application	on.		
4a) Of the above claim(s) is/are withdr			
5) Claim(s) is/are allowed.			
6)⊠ Claim(s) <u>1-46</u> is/are rejected.			
7) Claim(s) is/are objected to.	•		
8) Claim(s) are subject to restriction and	or election requirement.		
Application Papers			
9) The specification is objected to by the Examin	ner		
10) The drawing(s) filed on is/are: a) a		by the Examiner.	
Applicant may not request that any objection to the			
Replacement drawing sheet(s) including the corre	ection is required if the drawing	(s) is objected to. See 37 CFR 1.12	21(d).
11) The oath or declaration is objected to by the	Examiner. Note the attache	d Office Action or form PTO-152	2.
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for foreig a) All b) Some * c) None of:	gn priority under 35 U.S.C.	§ 119(a)-(d) or (f).	
1. Certified copies of the priority docume	nts have been received.		
2. Certified copies of the priority docume		Application No	
3. Copies of the certified copies of the pr			<b>:</b>
, application from the International Bure	au (PCT Rule 17.2(a)).		
* See the attached detailed Office action for a list	st of the certified copies not	received.	
Attachment(s)			
1) Notice of References Cited (PTO-892)	4) Interview	Summary (PTO-413)	
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(	s)/Mail Date	
3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>2/13/07</u> .	5)  Notice of I	nformal Patent Application	

Application/Control Number: 10/695,711

Art Unit: 2613

#### **DETAILED ACTION**

### Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- 2. Claims 1-3, 5-10, 12-14, 16-18, and 20-46 are rejected under 35 U.S.C. 102(e) as being anticipated by Way (U.S. Patent Application Publication No. 2003/0025961).

Regarding claim 1, 9, 12, 13, 16, 23, 30, 32, and 33, Way teaches an optical ring operable to communicate optical traffic (reference numeral 12 in Figure 6); a plurality of nodes (reference numeral 24, 26 in Figure 6) coupled to the optical ring, each node operable to passively add and drop one or more traffic streams to and from the optical ring, each traffic stream comprising at least one channel; and the plurality of nodes comprising: a hub node (reference numeral 24 in Figure 6) operable to selectively pass or terminate a plurality of individual sub-bands of the optical traffic; and a plurality of sub-band nodes (reference numeral 26 in Figure 6) each operable to terminate a respective sub-band of the optical traffic.

Regarding claims 2, 17, 24, Way teaches that the plurality of nodes further comprises a coupler node (i.e. any one of nodes 26 or the bottom-most node in Figure 6) operable to drop and continue optical traffic passing through the coupler node.

Regarding claims 3, 10, 14, 18, 25, 31, 34, 38, 44, Way teaches that the hub node comprises: a demultiplexer (i.e. "Three-color Splitters" of Figure 13) operable to demultiplex

Application/Control Number: 10/695,711

Art Unit: 2613

the optical traffic into its constituent sub-bands; a plurality of switches (i.e. the "1x1" switches of Figure 13) each operable to pass or terminate a respective sub-band; and a multiplexer (i.e. "Fiber Coupler" of Figure 13) operable to multiplex each sub-band passed at the plurality of switches for communication on the optical ring.

Regarding claims 5, 20, 26, Way teaches that the plurality of sub-band nodes each comprise a sub-band filter operable to block optical traffic in a respective sub-band (paragraph [0087]).

Regarding claims 6, 21, 27, Way teaches a combination sub-band node (Figure 20C) operable to terminate a plurality of sub-bands of the optical traffic.

Regarding claims 7, 22, 28, Way teaches that the combination sub-node comprises a plurality of cascaded sub-band filters (reference numeral 154 in Figure 20C) each operable to block optical traffic in a respective sub-band.

Regarding claims 8, 29, Way teaches an optical ring operable to communicate optical traffic (reference numeral 12 in Figure 6); a plurality of nodes coupled to the optical ring (reference numeral 24, 26 in Figure 6), each node comprising at least one transport element operable to passively add and drop one or more traffic streams to and from the optical ring, each traffic stream comprising at least one channel; and the plurality of nodes comprising a combination node (Figure 23), the combination node comprising: a coupler node transport element (reference numeral 120 in Figure 23) operable to drop and continue optical traffic passing through the coupler node transport element; and a hub node transport element (i.e. "Circulator" and reference numeral 166 in Figure 23) cascaded with the coupler node transport element, the hub node transport element operable to selectively pass (i.e. all wavelengths not

reflected by the tunable filter) or terminate (i.e. via reference numeral 166 in Figure 23) a plurality of individual sub-bands of the optical traffic.

Regarding claims 35 and 41, Way teaches an optical ring (i.e. "Ring" in Figure 19) operable to communicate optical traffic; a plurality of nodes (i.e. a node for each of the three rings) coupled to the optical ring, each node operable to passively add and drop one or more traffic streams to and from the optical ring, each traffic stream comprising at least one channel; the plurality of nodes comprising: a plurality of hub nodes (i.e. a hub node for each of the three rings) operable to selectively pass or terminate a plurality of individual sub-bands of the optical traffic; and a plurality of sub-band nodes (reference numeral 26 in Figure 6) each operable to terminate a respective sub-band of the optical traffic; wherein the plurality of hub nodes form a plurality of photonic domains (i.e. each ring) each operable to communicate different traffic streams in the same sub-bands without interference (paragraph [0071]).

Regarding claims 36-37 and 42-43, Way teaches that the plurality of hub nodes comprises two and three photonic domains (Figure 19).

Regarding claims 39 and 45, Way teaches that the plurality of switches are reconfigurable to provide optical shared path protection in the event of an error in the network (paragraph [0070]).

Regarding claims 40 and 46, Way teaches that the error comprises a fiber cut (as noted by "X" in the Figures).

# Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Application/Control Number: 10/695,711

Art Unit: 2613

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. Claims 4, 11, 15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Way in view of Johnson (U.S. Patent No. 6,868,201).

Regarding claim 4, 11, 15, 19, Way differs from the claimed invention in that Way fails to specifically teach that the demultiplexer and the multiplexer comprise array waveguides. However, Johnson teaches that the demultiplexers and multiplexers comprising array waveguides are well known in the art (column 8 lines 6-16). One skilled in the art would have been motivated to employ demultiplexers and multiplexers comprising array waveguides in the hub node of Way so that different band can be multiplexed and demultiplexed by the same device (column 8 lines 13-16 of Johnson). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include demultiplexers and multiplexers comprising array waveguides in the hub node of Way.

# Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Agustin Bello Primary Examiner Art Unit 2613